TOPCON
POSITIONING SYSTEMS

GR-3 Modem to GSM/CDMA Upgrade Installation Manual

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Manual Conventions

This manual uses the following conventions.

	Further information to note about the configuration, maintenance, or setup of a system.
	Notification that an action has the potential to adversely affect system operation, system performance, data integrity, or personal health.
	Supplementary information that can help you configure, maintain, or set up a system.
	Notification that an action *will* result in system damage, loss of data, loss of warranty, or personal injury.
	Supplementary information that can have an affect on system operation, system performance, measurements, or personal safety.
	Under no circumstances should this action be performed.

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Notes:

Installing the FH915+ Modem Upgrade

The GR-3 receiver is a multi-frequency, GPS+ receiver built to be the most advanced and compact receiver for the surveying market. The following is a quick reference guide to the GR-3 Operator's Manual on installing the FH915+ Modem Upgrade.

Chapter Contents

"Getting Started" on page 2

"Installing the FH915+ Modem Module" on page 3

Getting Started

You will need the following tools to complete the upgrade:

- Bluetooth® Antenna Cable Extraction Tool (P/N: 34-850402-01)
- Phillips screwdriver

NOTICE

Review all safety information in the GR-3 Operator's Manual and disassembly procedures before beginning to disassemble the GR-3.

NOTE

Be sure to record the IMEI number on the new GSM module for future reference. This number is needed to set up telephone service for the GSM. This number can also be accessed using Modem-TPS.

Parts List

Before you begin installing the GR-3 FH915+ Modem Upgrade, make sure your upgrade kit includes the items listed below.

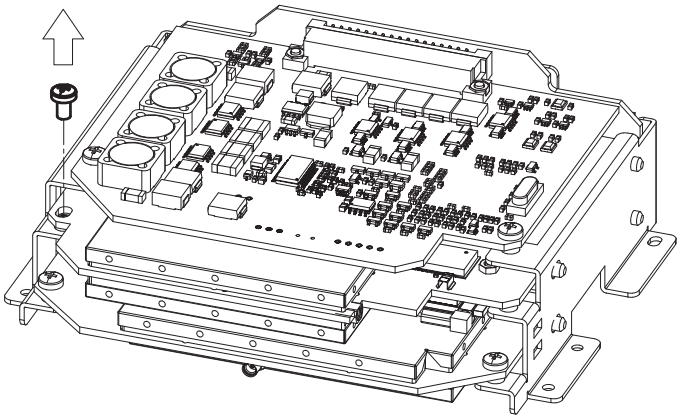
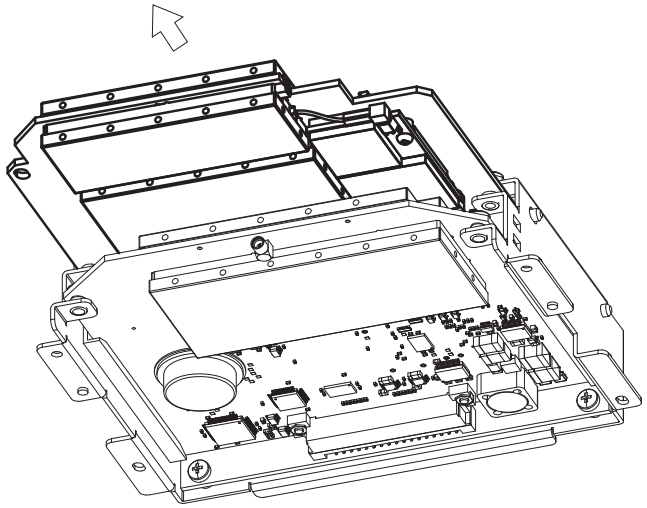
Table 1. Upgrade Contents

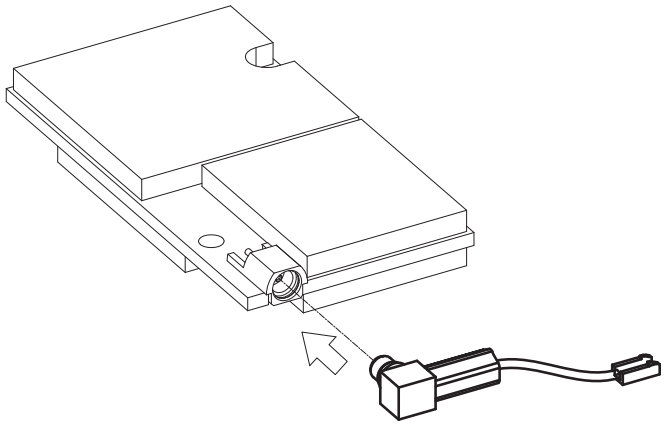
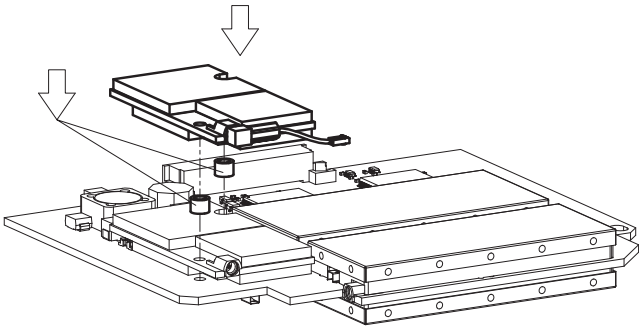
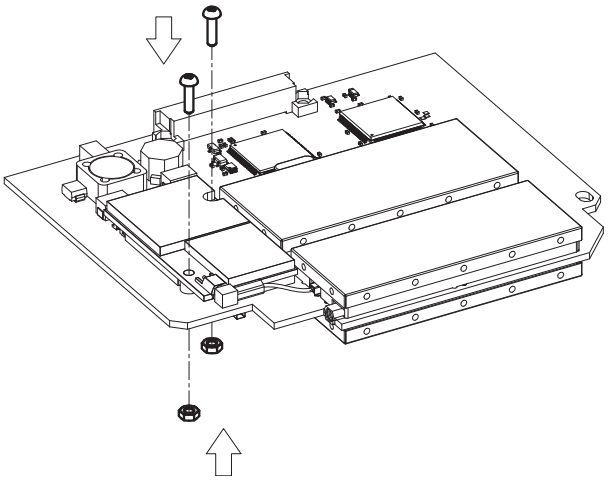
Qty	Part Number	Description
1	30-060001-01	MODULE,G24,GSM,850/900/1800/1900MHZ,EDGE
2	16-040803-01	SPACER, ROUND NYLON, OD 4 X 3MM
2	16-040802-01	NUT, HEX M2 STAINLESS STEEL
2	16-040801-01	SCR, M2.0 X 8 PAN HEAD PHILLIPS
1	14-004061-01	CABLE UMP/MMCX RA (0.04M)

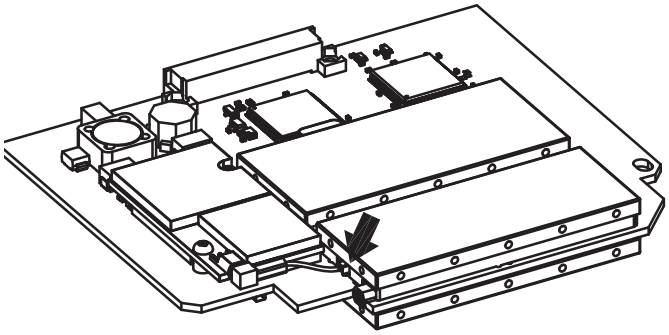
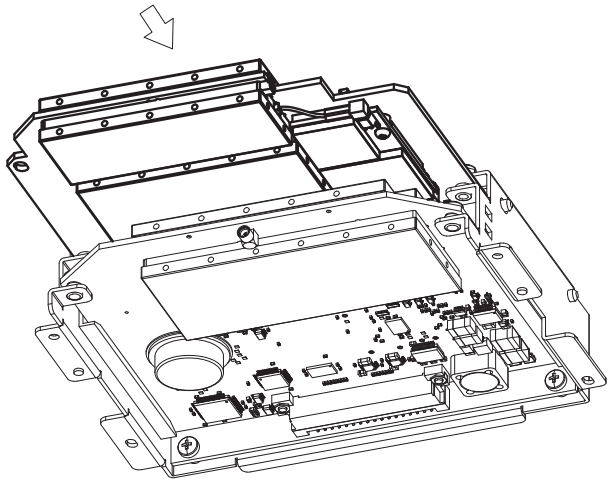
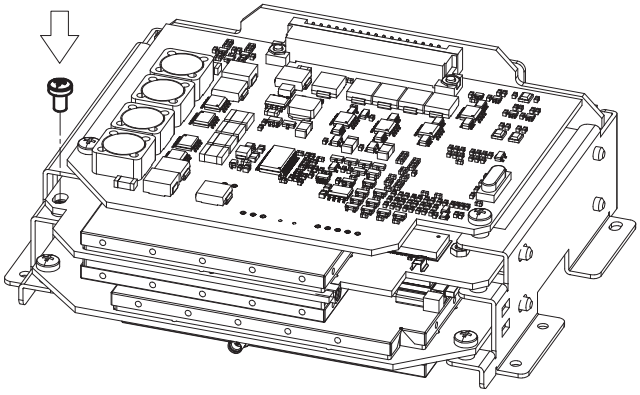
Installing the FH915+ Modem Module

Follow the directions in the GR-3 Assembly Manual to remove the card cage assembly.

These steps walk you through installing the GSM module onto the GR-3 receiver.

Step	Procedure	Illustration
Step 1: Remove the screw	Remove the remaining middle-level screw.	
Step 2: Remove the modem subassembly	Remove the modem subassembly.	

Step	Procedure	Illustration
Step 3: Connect the cable to to the modem	Connect the UMP/MMCX RA cable to the FH915^{+} modem module.	
Step 4: Place the modem module onto the subassembly	Place the FH915^{+} module onto the modem subassembly using the two round nylon spacers.	
Step 5: Secure the module using nuts and screws	Secure the FH915^{+}module using the two screws (M2,0x8 metric pan head Phillips) and the two nuts (M2 metric hex nut stainless steel) provided. NOTE: Before securing the FH 915^{+} module, make sure the connectors are completely aligned with the modem.	

Step	Procedure	Illustration
Step 6: Connect the cable to the modem subassembly	Connect the UMP/MMCX RA cable to the modem subassembly.	
Step 7: Insert modem subassembly into the card cage	Insert the modem subassembly into the middle level of the card cage.	
Step 8: Secure middle-level screws	Secure the middle-level screw (M3x5 metric machine screw, Phillips, stainless steel, pan head) into the card cage.	

Follow the directions in the GR-3 Assembly Manual to reinsert the card cage assembly.

Notes:

Installing the Digital UHF Modem Upgrade

The GR-3 receiver is a multi-frequency, GPS+ receiver built to be the most advanced and compact receiver for the surveying market. The following is a quick reference guide to the GR-3 Operator's Manual on installing the Digital UHF Modem Upgrade.

Chapter Contents

"Getting Started" on page 2-2

"Installing the Digital UHF Modem Module" on page 2-3

Getting Started

You will need the following tools to complete the upgrade:

- Bluetooth® Antenna Cable Extraction Tool (P/N: 34-850402-01)
- Phillips screwdriver

Review all safety information in the GR-3 Operator's Manual and disassembly procedures before beginning to disassemble the GR-3.

Be sure to record the IMEI number on the new GSM module for future reference. This number is needed to set up telephone service for the GSM. This number can also be accessed using Modem-TPS.

Parts List

Before you begin installing the GR-3 Digital UHF Modem Upgrade, make sure your upgrade kit includes one of the items listed below.

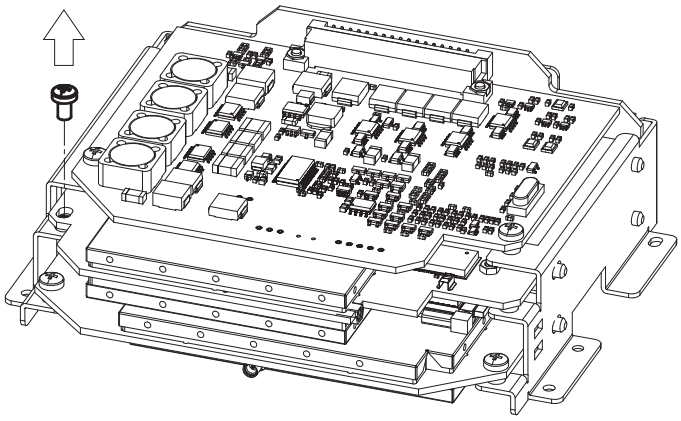
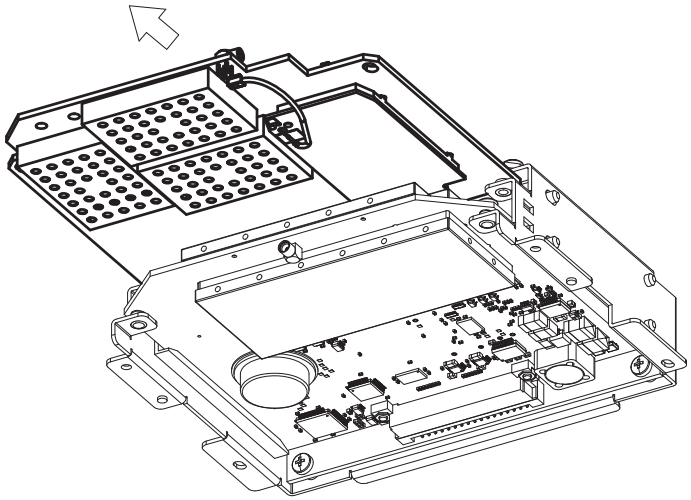
Table 1. Upgrade Contents

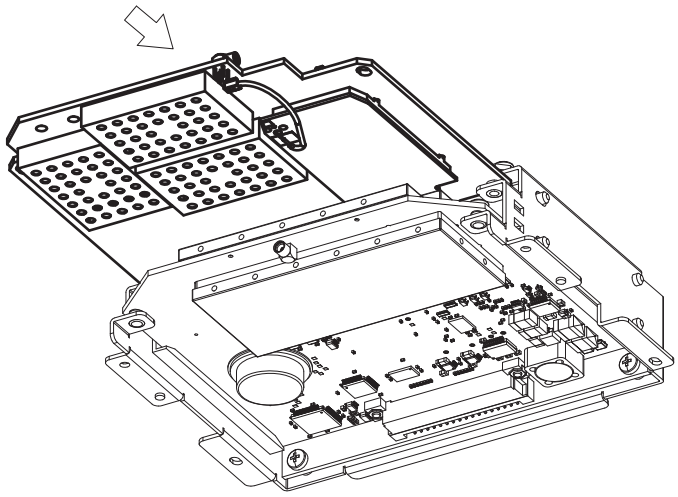
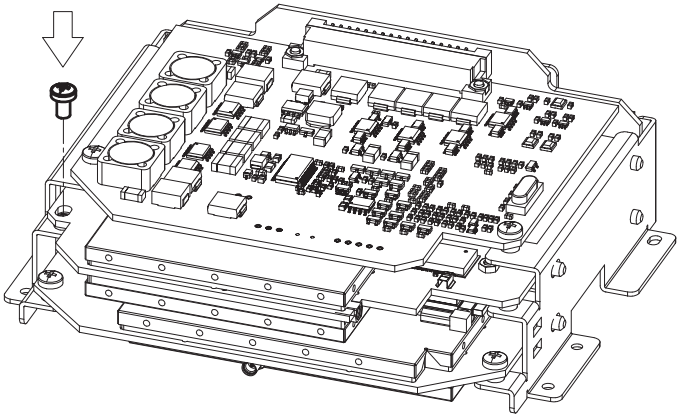
Qty	Part Number	Description
1	02-050915-02	PCBA ARWEST + EURO GSM
1	02-050915-03	PCBA Digital UHF + US GSM
1	02-050915-04	PCBA Digital UHF + Sprint CDMA
1	02-050915-05	PCBA Digital UHF + Verizon CDMA

Installing the Digital UHF Modem Module

Follow the directions in the GR-3 Assembly Manual to remove the card cage assembly.

These steps walk you through removing the from the card cage.

Step	Procedure	Illustration
Step 1: Remove the middle-level screw	Remove the remaining middle-level screw.	
Step 2: Remove the modem subassembly	Remove the modem subassembly.	

Step 3: Insert the Digital UHF Modem	Insert the Digital UHF Modem module.	
Step 4: Secure middle-level screw	Secure the middle-level screw	

Follow the directions in the GR-3 Assembly Manual to reinsert the card cage assembly.

Notes: